A Proposal to Improve the Resuability of Electronics

There is an increasing drive to recycle or reuse waste electronics to reduce the environmental impact of the waste products.

This proposal focuses on reuse of the electronics, not the recycling or dismantling of the devices. To reuse electronics there is a need for information about the functionality of that electronics. The basic idea is that enogh information is released to allow any electronic device to be reused for other purposes. This would allow people to reuse electronic devices without having to put considerable effor into reverse engineering electronics, which in some case may require huge amounts of effort or equipment or both, and may be practically impossible in some cases.

Instead, when a product is released, a basic package of information is stored in a database. This package has at a minimum enough information to reuse the electronic device. At a later date, when the product has reached the end of the original life, the package of information is released, allowing reuse of the hardware.

There are several details about this scheme:

- The package of information could be released at product release time
- The package of information could be as detailed as the manufacturer wishes it to be. A full package of electronics would be equivalent to the hardware and firmware being open source
- Having this information would allow a new form of electronic product, one that reuses hardware. This has been difficult in the past without the information necessary to use the hardware.
- If a manufacturer ceases to exist then the information is released.
- Basic information would include as a minimum circuit diagrams and instruction sets of processong elements, memory maps etc, such that hardware can be used.
- Highly sensitive areas, such as encrypted data can be omitted and simply not reused.
- This package of information could also be useful when repairing the equipment. This can also reduce waste.